

INDUSTRIAL TRAINING REPORT
AT
FINANCE DIVISION
MALAYSIAN AIRLINES SYSTEM BERHAD
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“In the name of ALLAH the Most Gracious, the Most Merciful”

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ABSTRACT

The purpose of the research study is to determine the most suitable technique to generate the forecast of total revenue, total expenditure and available seat kilometers (ASK) using time series data from the Annual Report of Malaysia Airlines (MAS). The models understudied are based on Univariate Modeling Techniques i.e. Naïve with Trend Model, Average Change Model, Average Percent Change Model, Double Exponential Smoothing, Holt's Method Model and Adaptive Rate Response Exponential Smoothing (ARRES). These models are normally used to determine the forecasts by initially analyzing the decomposition pattern for annual total revenue, total expenditure and available seat kilometers (ASK). The performances of the models are validated by retaining a portion of the quarterly observations as holdout samples. In addition, comparisons are made to see how well the historical and forecasted data matched and correlated. The selection of the most suitable model was indicated by the smallest value of mean square error (MSE) and Mean Absolute Percent Error (MAPE). Based on the analysis, Adaptive Rate Response Exponential Smoothing (ARRES) is the most suitable model for forecasting annual total revenue, total expenditure and available seat kilometers (ASK) in Malaysia Airlines (MAS) since MSE and MAPE calculated for this model provides the smallest value compared to the respective error measures of other models. The forecast values of total revenue, total expenditure and available seat kilometers (ASK) in Malaysia Airlines for year 2014 are RM 14,182,393,194, RM 15,352,469,089 and 58,019,811,952 seats per kilometer, respectively.

Keywords: Univariate Modelling Techniques; Forecast Model; Mean Square Error

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